



Introducing Intel® vPro™ Technology  
A leap forward in business PCs.



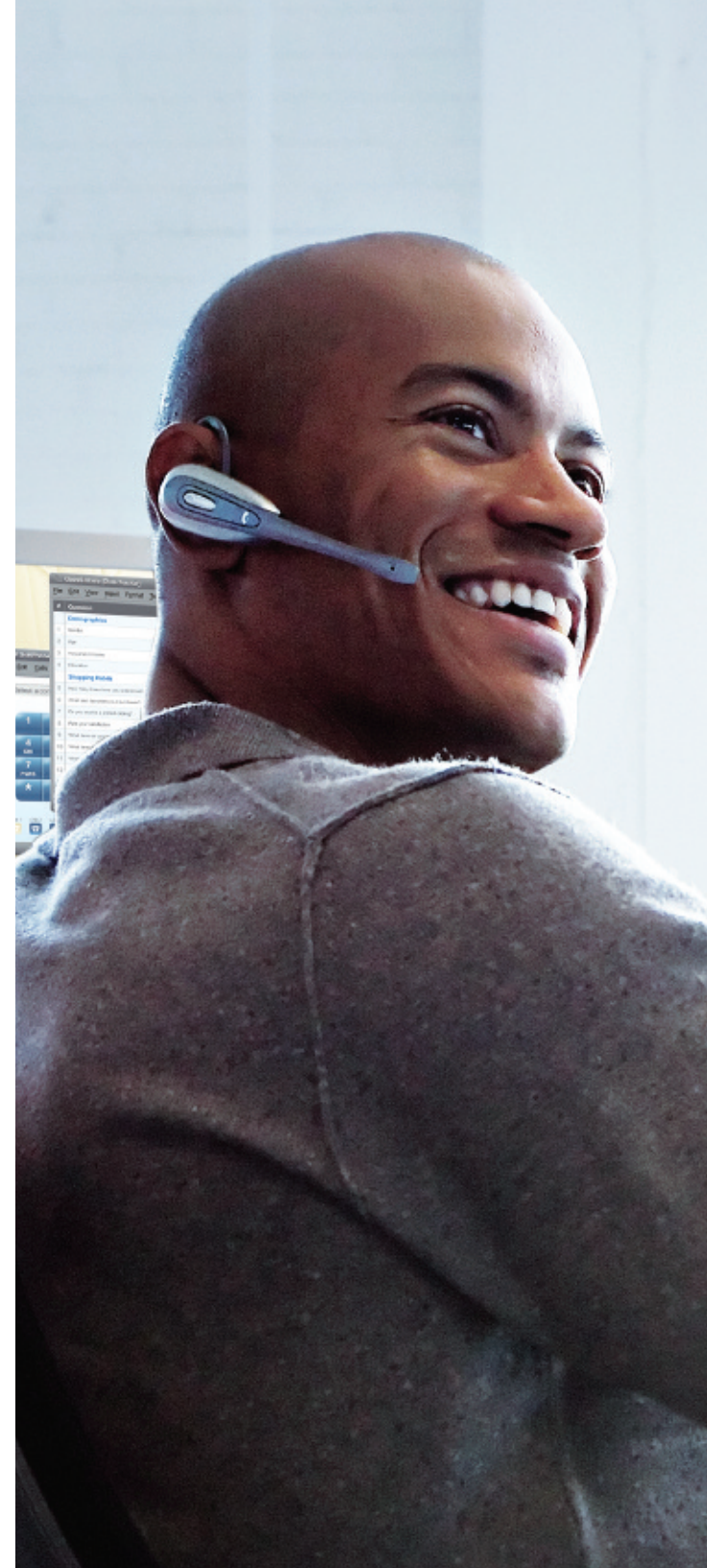


# Shift your focus from managing PCs to accelerating business success.

Leap forward with Intel® vPro™ technology—powerful, professional-grade capabilities that simplify management of desktop PCs. With the advantages of built-in manageability, proactive security and the energy-efficient dual-core performance of the Intel® Core™2 Duo processor, IT managers are free to focus on more strategic initiatives to accelerate business success.

With Intel vPro technology, you can reduce costly desktide visits and accurately inventory assets—and do it all remotely. Add new layers of security to the PCs in your fleet—even for systems that are powered off or whose operating system is down. And, do this with a high-performance, energy-efficient desktop PC that is Windows Vista\* Premium Ready.

Intel vPro technology. A leap forward in business PCs.



# Meet critical IT challenges with Intel® vPro™ technology.

Remote manageability, improved security, and energy-efficient performance built into the business PC.

## Solve the most costly IT problems.

Desktop PCs with Intel vPro technology give you critical capabilities not available in previous generations of PCs or in software-only solutions. When provisioned with third-party manageability and security software,<sup>1</sup> these PCs can be managed directly from the IT console, regardless of PC power state or the health of their OS.

And, when it comes to performance, you've got it. PCs with Intel vPro technology feature the Intel Core 2 Duo processor with outstanding 64-bit dual-core performance to give you the headroom you need to run manageability and security applications in the background without interrupting the end-user experience.

Intel vPro technology enjoys broad industry support from PC manufacturers, major software vendors, and IT out-sourcers worldwide. And, PCs with Intel vPro technology are Windows Vista Premium Ready, giving you built-in expansion for the future.

PCs with Intel vPro technology offer these capabilities:

**Remote asset manageability.** Accurately inventory PCs and their hardware and software assets anytime, even if systems are powered off or their OS is not working properly.

**Remote problem resolution.** Remotely boot, troubleshoot, repair, and restore systems, and significantly reduce the number of desk-side visits and service center calls.

**Enhanced security.** Hardware-enhanced security capabilities are resistant to hackers, viruses, and worms, and isolated from inadvertent tampering. Now you can stop more threats before they spread, protect critical information, make sure security software and other agents stay active, and enforce PC compliance with your corporate IT policies.

**Improved multitasking.** The Intel Core 2 Duo processor helps keep users working effectively with the power to run compute-intensive applications in the foreground while IT tasks such as software updates, virus scans, and real-time data feeds run in the background.

**Energy-efficient performance.** Every PC with Intel vPro technology is powered by the new Intel Core 2 Duo processor, providing superior performance in a power-efficient design that helps reduce PC noise in your office.

**Ready for the future.** Easily upgrade to 64-bit applications and the next-generation PC operating system (OS), Windows Vista.



**Intel vPro Technology.**  
A Leap Forward  
in Business PCs.

- > BUILT-IN  
MANAGEABILITY
- > PROACTIVE  
SECURITY
- > ENERGY-EFFICIENT  
PERFORMANCE



> CAN YOU FIND THE PCs ON YOUR NETWORK? EVEN IF THEY'RE POWERED DOWN?

### Intel® Active Management Technology<sup>1</sup> (Intel® AMT)

PCs with Intel vPro technology have Intel® AMT built into the PC hardware. Intel AMT includes three key capabilities:

**Nonvolatile memory** is a protected, persistent hardware-based space where critical system information can be secured and stored out of reach of users, intruders, viruses, and worms. Authorized IT technicians can now access the data in this memory as long as the PC is connected to a power source and plugged into the network.

**An additional hardware-based communication channel** runs "under" the OS and allows authorized IT to remotely power up, reboot, control, and communicate with a PC, even if the system is powered off or the OS is problematic or unavailable.

**Isolation hardware** disconnects the PC's network data path when an inbound or outbound threat is recognized. This helps enable a faster quarantine, regardless of PC power state or OS health.

## Simpler, remote management from the IT console.

Reduce deskside visits, improve asset inventories, and increase user uptime.

### Do what you need to do faster, more efficiently, and remotely.

PCs with Intel vPro technology offer new hardware-based capabilities that enable third-party management software to remotely find, inventory, diagnose, and repair PCs. Now you can reduce deskside visits;<sup>2</sup> tedious manual inventories, and manual updates. More work can be performed remotely, even on PCs that are powered off at the start of the maintenance cycle.


**Inventory PCs.** No more searching for PCs you think are out there. A secure, hardware-based communication channel means that polling and management agents are no longer restricted by the PC power state or health of the OS. You can now find and accurately inventory every PC with Intel vPro technology on your network.

**Inventory hardware and software assets.** Store hardware and software asset information in the PC's secure, non-volatile memory, where it can be accessed by authorized IT. This ensures accurate inventories anytime.

**Reduce deskside visits.** Achieve fast, efficient troubleshooting, problem resolution, and disaster recovery for both software and hardware problems. PCs with Intel vPro technology include remote boot, diagnosis, and restore capabilities even if the system is off, down, or otherwise not working properly.







# Proactive security. Even for PCs that are powered off.

Protect security agents, enforce system compliance, and arrest more threats.

## **Stop security threats before they reach the OS.**

Intel vPro technology helps third-party security software identify more threats before they reach the OS, isolate infected systems more quickly, and update PCs regardless of their power state.

**Filter network traffic before it hits the OS or your network.** Inbound and outbound network traffic can be automatically filtered for viruses, worms, and other threats. This helps prevent infected messages from being sent on to or out from the OS and user applications.

**Isolate compromised PCs faster.** Hardware-based defenses can quickly quarantine compromised systems from the network. At the same time they still maintain a communications channel that allows IT to diagnose the problem and remediate machines more quickly.


**Receive instant notification if agents go missing.** PCs can automatically verify the presence of their own security agents and other software, to help make sure agents stay active.

**Access asset information anytime.** Authorized IT can now access software version information anytime to find out if applications are up to date and the PC is in compliance before it is allowed network access.

**Improve problem investigation and disaster recovery.** PCs can send critical alerts to the IT console, even when the system is powered down or the OS isn't working, to improve troubleshooting, threat investigation, and disaster recovery.

**Push updates simply and remotely.** Secure remote power-up and communication channels let you quickly push updates remotely, even if PC power was off at the start of the scheduled maintenance.

**Create a virtual environment to improve security.** Deploy a new generation of self-contained virtual appliances in a tamper-resistant environment that is accessible only to authorized IT. These appliances can perform vital security and management services, such as deep-packet inspection or policy compliance.



## **Intel® Virtualization Technology<sup>3</sup> (Intel® VT)**

PCs with Intel vPro technology offer IT the option of enhancing security and manageability with a virtualized environment.

The virtualized environment, or "virtual appliance," runs outside the main OS, invisible to users and under IT control. It includes its own application code and embedded OS. It is also fully isolated from the production OS, resistant to tampering, and offers IT a more secure, stable environment for critical services.

A virtual appliance from a third-party vendor can now provide resilient security and manageability outside the limitations and vulnerabilities of the main OS. If the virtual appliance detects a security problem or deviation from IT policy, it is enabled for many remediation paths, including alerting, isolation of the main OS from the network, or deployment of a local patch.

Third-party virtual appliances enabled by Intel® VT are self-contained. They include all the necessary software components in a single package, giving IT one software vendor, one install, and one support structure.

> CAN YOU STOP MORE THREATS BEFORE THEY REACH YOUR PC'S OPERATING SYSTEM?

> DO YOU GET THE PERFORMANCE YOU NEED FROM YOUR PCs?

#### Intel® Core™2 Duo processors

The new Intel® Core™2 Duo processor, based on the Intel® Core™ microarchitecture, sets new standards for energy-efficient performance. Innovative features include:

**Intel® Wide Dynamic Execution** provides a 4-wide pipeline capable of fetching, dispatching, executing and retiring up to five instructions per clock cycle, which enables faster instruction throughput and improved processor performance.

**Intel® Smart Memory Access** reduces system memory latency effects by intelligently pre-fetching data from system memory to fast L2 cache.

**Intel® Advanced Smart Cache** is a multi-core optimized shared cache that dynamically allocates L2 cache to each core depending on workload. Together, Intel Smart Memory Access and Intel Advanced Smart Cache reduce latency to frequently used data, improving performance and efficiency.

**Intel® Advanced Digital Media Boost** significantly improves throughput on most 128-bit SSE/2/3 instructions commonly used in video, speech, audio, encryption, financial, engineering, and scientific applications.

**Intel® Intelligent Power Capability** takes advantage of ultrafine-grained power control to turn logic systems on only when required, optimizing processor energy usage.

## Higher performance with energy efficiency.

Multitask—even with compute-intensive applications—on quieter, energy-efficient PCs.

### Better performance, improved energy efficiency, and less noise in the office.

In today's IT environments, an increasing number of background applications, such as manageability applications, virus scans, antispyware, email synchronization, backups, and Voice over IP (VoIP), are necessary to run a business.

To keep your client infrastructure running effectively, PCs with Intel vPro technology use the new 64-bit Intel Core 2 Duo processor. The Intel Core 2 Duo desktop processor is up to 40% faster and more energy efficient<sup>4</sup>—significantly improving the responsiveness of the system. Optimized for multitasking and multithreading, Intel Core 2 Duo processors deliver immediate performance benefits on today's applications. Users can work effectively even while demanding applications run in the background. And, critical IT tasks that keep the PC secure and managed no longer impact the user's foreground experience. Designed for energy efficiency, the Intel Core 2 Duo processor can also enable smaller, quieter systems that make your office a more pleasant place to work.







# With Intel built in, you have success built in.

Security and manageability capabilities help accelerate business success.

## Today's challenges.

You're passionate about your business and care about the capabilities delivered by PCs. At the same time, you want to spend as few resources as possible on the routine tasks of managing, configuring, and updating systems.

PCs with Intel vPro technology let you spend less time on day-to-day tasks, and free up resources to address critical challenges and explore new opportunities.

## Built-in manageability, proactive security, and energy-efficient performance.

PCs with Intel vPro technology have the capabilities you need designed into the hardware to support your business-critical tasks: remote manageability, remote problem resolution, new capabilities for securing PCs, and energy-efficient performance.

Now you can reach every PC with Intel vPro technology in your business—simply, securely, and quickly—even when the PCs are powered down, even if their OS isn't working. You can power them up, check their assets, and push your updates down the wire. If a PC is down, you can boot it up remotely, diagnose and repair it, and get your users up and running. You can do all this from your IT desk. You can even do it in the background, without intruding on your users. And, all this can be done without buying costly upgrades and additions to enable those capabilities.

Shift your focus from managing PCs to accelerating business success.

**To learn more about Intel vPro technology,  
a leap forward in business PCs, visit**  
[www.intel.com/vpro](http://www.intel.com/vpro).

## Broad industry support and Windows Vista\* Premium Ready.

PCs with Intel vPro technology will be available from major PC hardware vendors.

Major independent software vendors (ISVs) are creating manageability and security software solutions for PCs with Intel vPro technology. Software applications may not be compatible with all operating systems. You should check with your application vendor before purchasing.

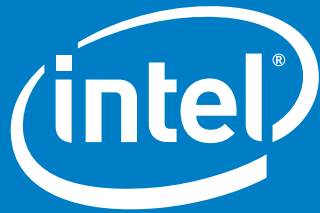
To improve services to their customers, IT outsourcingers worldwide are choosing Intel vPro technology as the IT solution they will support.

PCs with Intel vPro technology are part of the Intel® Stable Image Platform Program (Intel® SIPP), so you can avoid unexpected changes that might force software image revisions or hardware requalifications.

PCs with Intel vPro technology are ready for the next-generation Windows Vista operating system and 2007 Microsoft Office\*, and include full 64-bit support and the highest levels of the Windows Vista Aero\* experience.

> ARE YOUR PCs READY FOR WINDOWS VISTA AND 64-BIT APPLICATIONS?





[www.intel.com/vpro](http://www.intel.com/vpro)

<sup>1</sup> Intel® Active Management Technology requires the platform to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source, and a network connection.

<sup>2</sup> A study by Intel of 44,000 trouble tickets showed that computers with better remote capabilities could help IT eliminate virtually all desktide visits made to restore a system to known-good media, and could eliminate approximately 40% of desktide visits overall. This information was reported in the IT@Intel-authored white paper titled, Reducing Costs with Intel® Active Management Technology, published in August, 2005. To download the white paper, visit [www.intel.com/go/iamt](http://www.intel.com/go/iamt)

<sup>3</sup> Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

<sup>4</sup> Performance based on SPECint\*\_rate\_base2000 (2 copies) and energy efficiency based on Thermal Design Power (TDP), comparing Intel® Core™2 Duo E6700 to Intel® Pentium® D Processor 960. Actual performance may vary. See [www.intel.com/performance](http://www.intel.com/performance) for more information.

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